Trends in rates of reported gonococcal infections in Canada, 1962-83

Based on material previously published in *Canada Diseases Weekly Report* (a publication of the Bureau of Epidemiology, Laboratory Centre for Disease Control, Department of National Health and Welfare, Tunney's Pasture, Ottawa, Ont. K1A 0L2) by J. Hockin, MD, Bureau of Epidemiology (1985; 11: 5-8). Publication in *CMAJ* is with permission of the author and the bureau.

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Rates of gonorrhea were obtained from the Bureau of Epidemiology's annual reports on sexually transmitted disease and from Statistics Canada publications on reportable diseases. Before 1971 there was no detailed breakdown of the data for those aged 20 to 39 years. This is unfortunate because it is clear from data collected since 1971 that there are large differences within this group. Moreover, it has not been possible to obtain data on age for all years from some provinces. To avoid adding to any existing discrepancies between data from different sources, the information presented here is based as much as possible on the bureau's own publications. It should also be kept in mind that notifications represent only a small proportion of all cases, perhaps as little as 10%.

Figs. 1 and 2 show the age-specif-

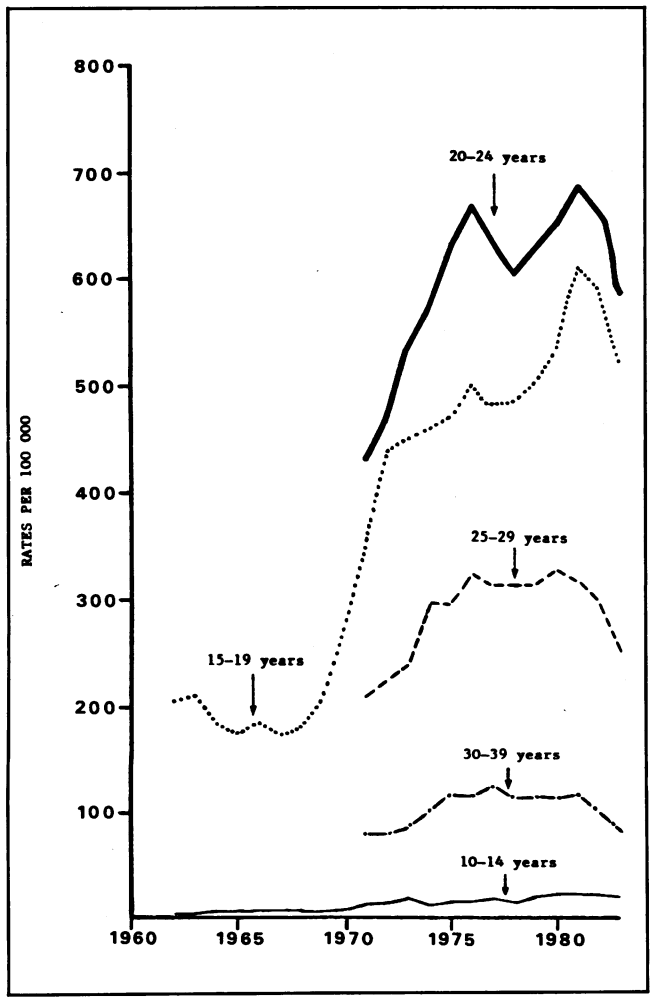

Fig. 1—Age-specific rates of reported gonococcal infections in females, Canada, 1962–83.

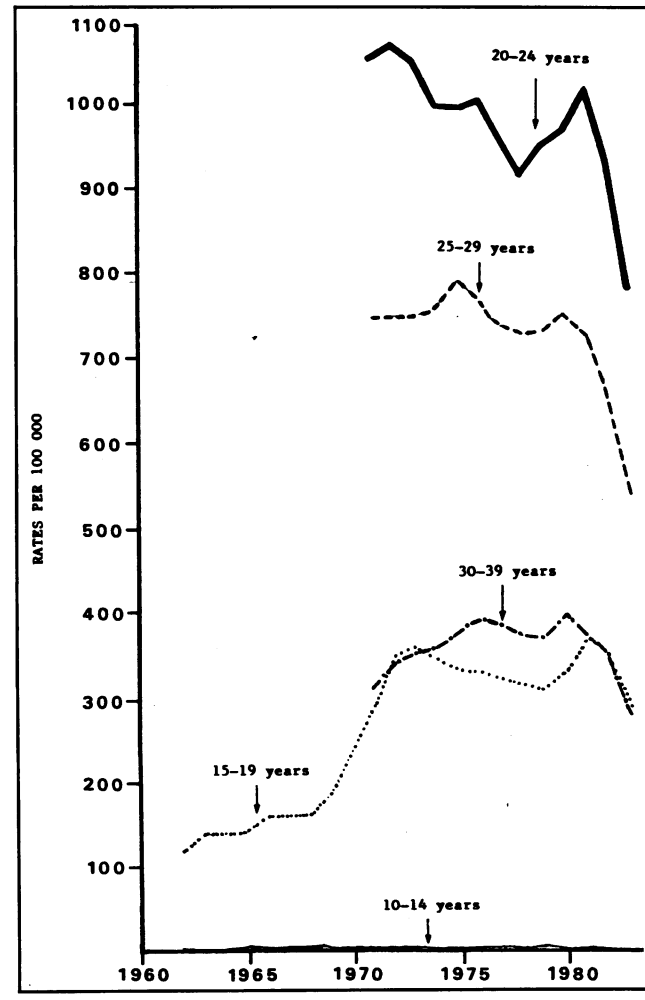

Fig. 2—Age-specific rates of gonococcal infections in males, Canada, 1962–83.

ic rates of reported gonococcal infections from 1962 to 1983 for females and males respectively. The curves of the age groups with the highest incidence rates (15 to 19 and 20 to 24 years for females; 20 to 24 and 25 to 29 years for males) are similar to those for all age groups combined over the same period. All the curves show increasing rates to the mid-1970s and decreasing rates after 1981. The rates for males exceed those for females only after age 20.

The trends in the rates are more readily observed by examining the rates among successive birth cohorts. Figs. 3 and 4 show the rates for cohorts born at 5-year intervals from 1945 to 1965. The curves for females show that those born later have had higher rates of gonorrhea as teenagers. These rates have been rising earlier and faster and have been reaching a higher peak with each cohort since that born in 1950. To date the descending halves of the curves are more or less coincident, which suggests that after the age of peak incidence the acquisition of new gonococcal infections follows a set pattern. The lifetime risk of contracting gonorrhea appears to be increasing for females.

The curves for males show a different pattern. The rises in rates for those born after 1950 follow approximately the same line, to a peak that is lower for younger cohorts. The rates have also been declining more rapidly in the younger cohorts. If this pattern continues, the lifetime risk of gonococcal infection in males will be substantially reduced.

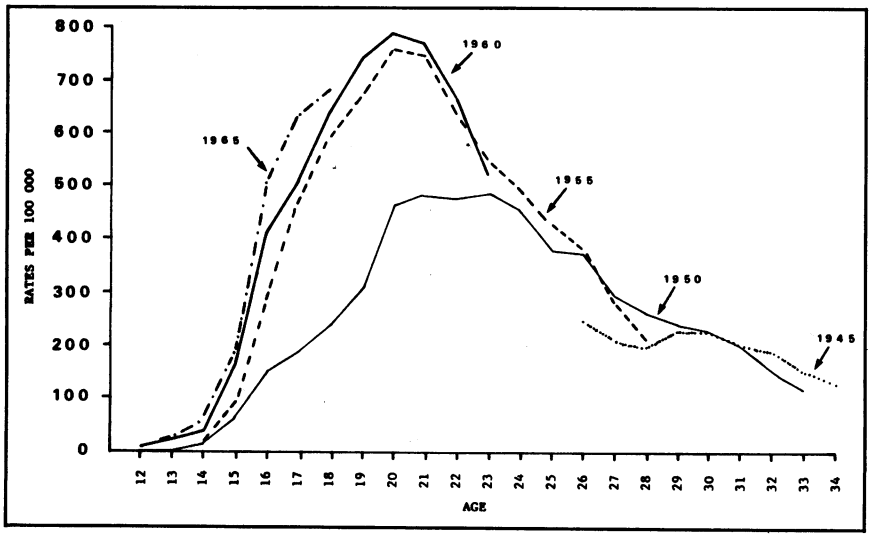

Fig. 3—Rates of reported gonococcal infections in Canadian female cohorts born at 5-year intervals from 1945 to 1965.

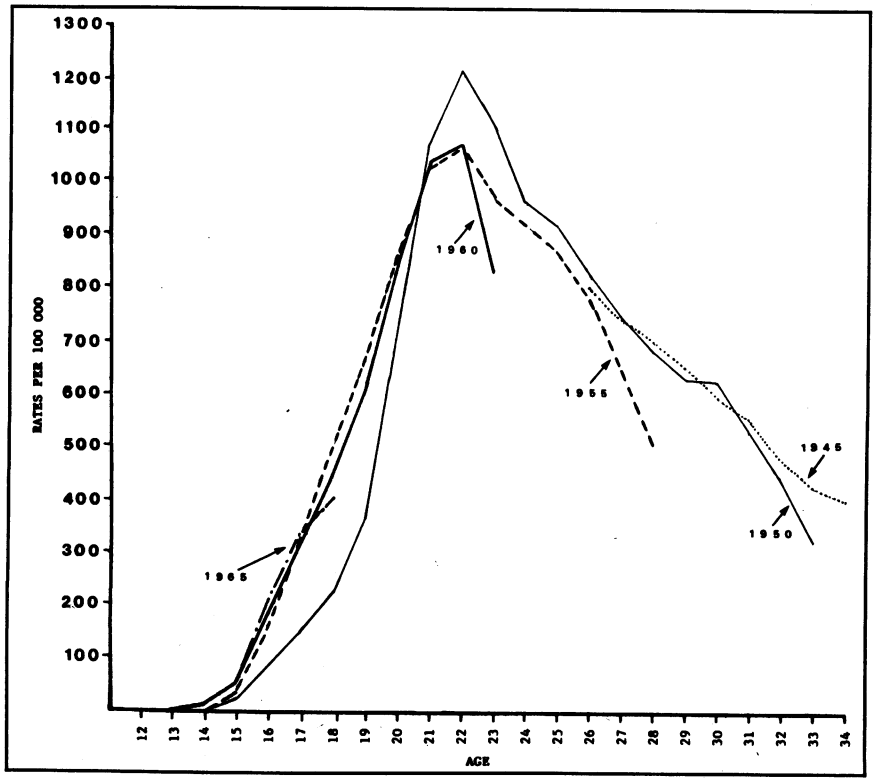

Fig. 4—Rates of reported gonococcal infections in Canadian male cohorts born at 5-year intervals from 1945 to 1965.

Comments

The trends in the age-specific rates, particularly among males, illustrated by the birth cohort curves raise several questions. Is the recent decline in rates occurring more among homosexual males than among heterosexual males? Why are the rates for females rising earlier and faster? Does this reflect an unequal burden on females resulting from the sexual revolution of the 1960s that is still affecting those born in the midst of that revolution? Finally, what is the significance of changes in the curves? To the clinician, any decrease in the incidence of gonorrhea is counterbalanced by the largely unmeasured incidence of nongonococcal sexually transmitted disease and by the chronic consequences of sexually transmitted disease in females.■